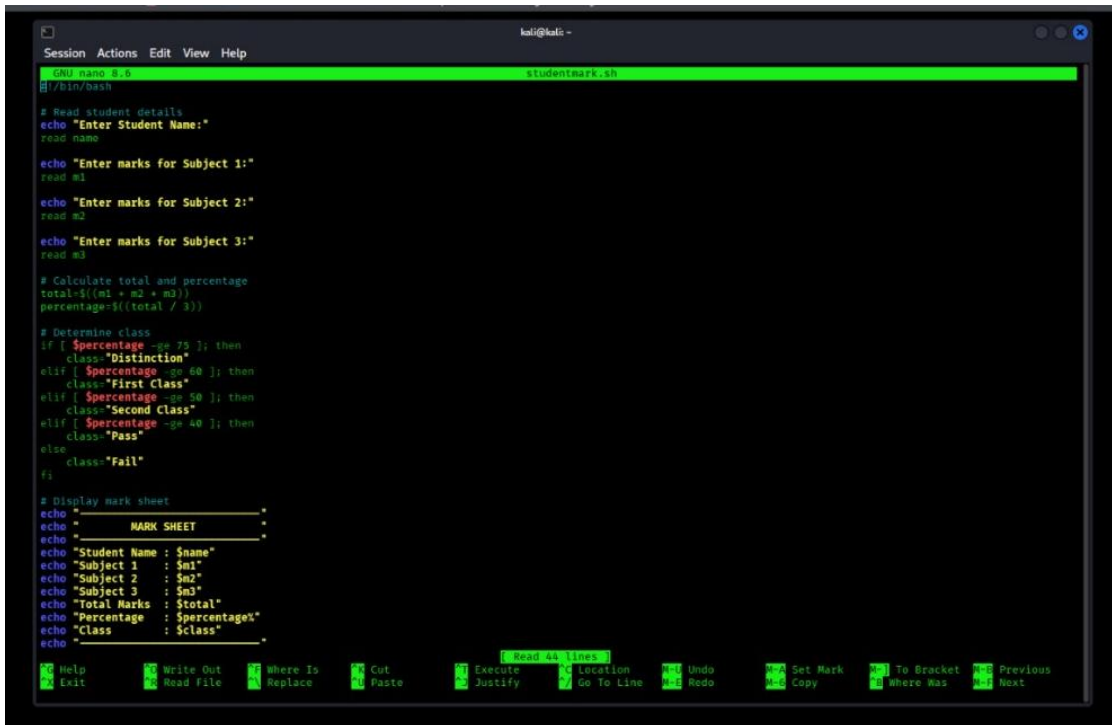


1. Write a shell script to generate mark- sheet of a student. Take 3 subjects, calculate and display total marks, percentage and class obtained by the student.



```
Session Actions Edit View Help
GNU nano 2.9.6 studentmark.sh
#!/bin/bash

# Read student details
echo "Enter Student Name:"
read name

echo "Enter marks for Subject 1:"
read m1

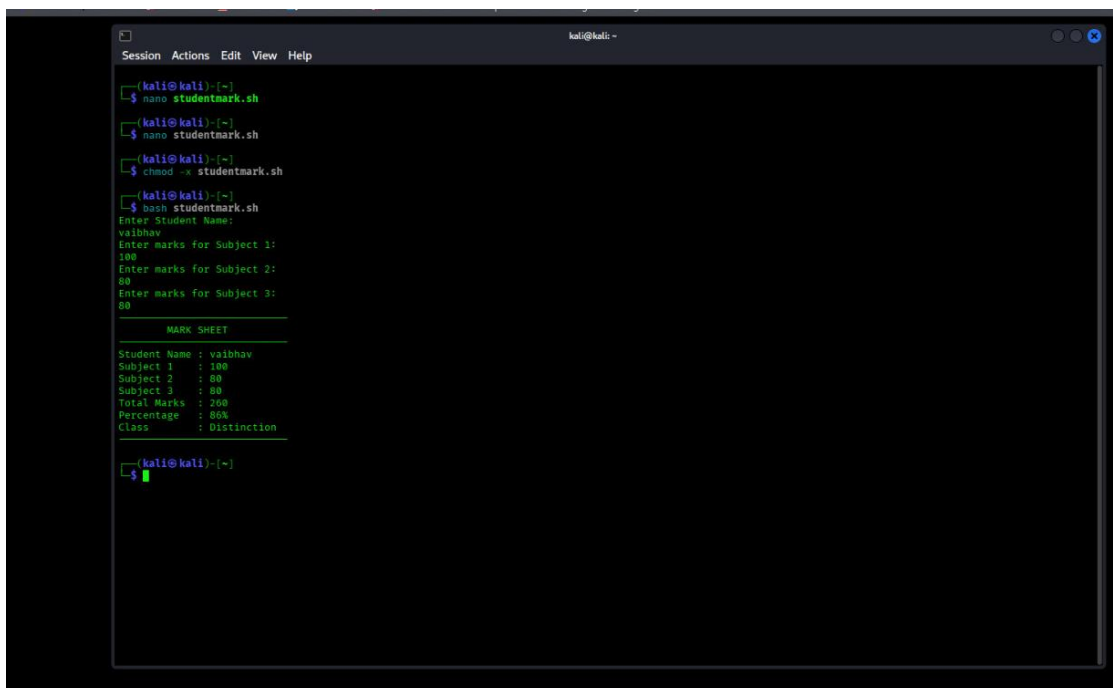
echo "Enter marks for Subject 2:"
read m2

echo "Enter marks for Subject 3:"
read m3

# Calculate total and percentage
total=$((m1 + m2 + m3))
percentage=$((total / 3))

# Determine class
if [ $percentage -ge 75 ]; then
    class="Distinction"
elif [ $percentage -ge 60 ]; then
    class="First Class"
elif [ $percentage -ge 50 ]; then
    class="Second Class"
elif [ $percentage -ge 40 ]; then
    class="Pass"
else
    class="Fail"
fi

# Display mark sheet
echo "===== MARK SHEET ====="
echo "Student Name : $name"
echo "Subject 1 : $m1"
echo "Subject 2 : $m2"
echo "Subject 3 : $m3"
echo "Total Marks : $total"
echo "Percentage : $percentage%"
echo "Class : $class"
echo "=====
```



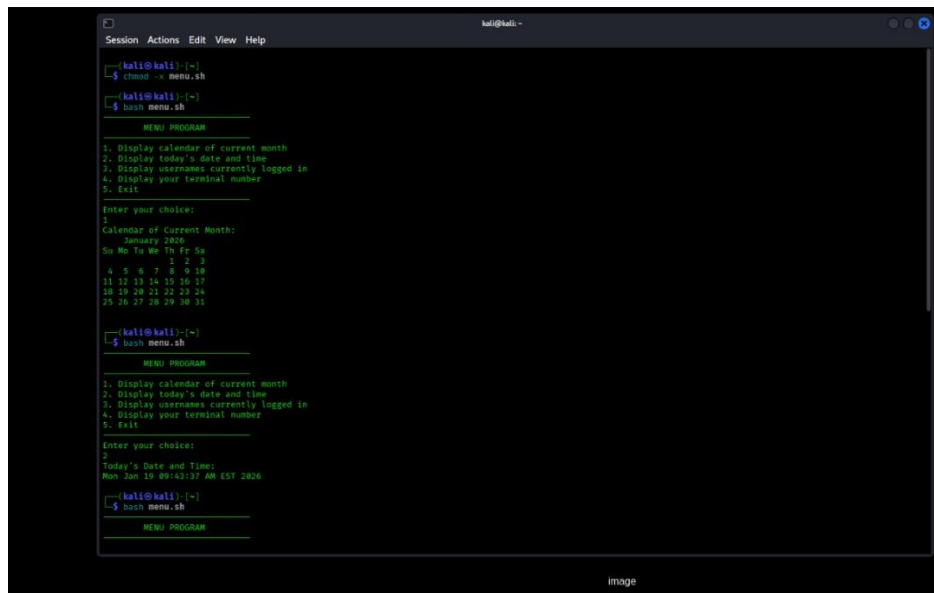
```
kali@kali: ~
$ nano studentmark.sh
$ nano studentmark.sh
$ chmod +x studentmark.sh
$ bash studentmark.sh
Enter Student Name:
vaibhav
Enter marks for Subject 1:
100
Enter marks for Subject 2:
80
Enter marks for Subject 3:
80

===== MARK SHEET =====
Student Name : vaibhav
Subject 1 : 100
Subject 2 : 80
Subject 3 : 80
Total Marks : 260
Percentage : 86.6%
Class : Distinction

$
```

2. Write a menu driven shell script which will print the following menu and execute the given task. .

- Display calendar of current month
- Display today's date and time
- Display user names those are currently logged in the system
- Display Your terminal number



```
kali@kali:~$ chmod +x menu.sh
kali@kali:~$ bash menu.sh

MENU PROGRAM

1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit

Enter your choice:
1
Calendar of Current Month:
January 2026
Su Mo Tu We Th Fr Sa
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

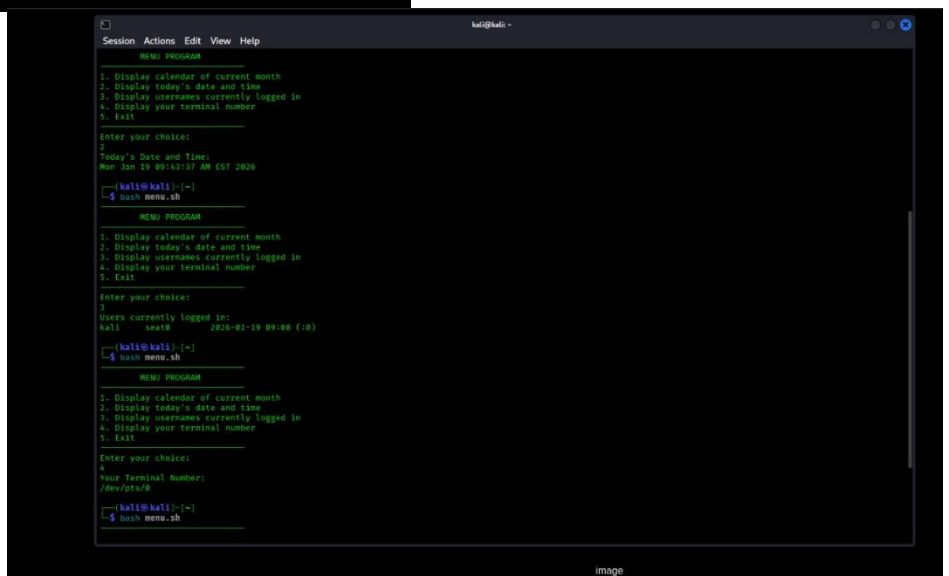
kali@kali:~$ bash menu.sh

MENU PROGRAM

1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit

Enter your choice:
2
Today's Date and Time:
Mon Jan 19 09:43:37 AM EST 2026

kali@kali:~$ bash menu.sh
```



```
kali@kali:~$ bash menu.sh

MENU PROGRAM

1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit

Enter your choice:
3
Today's Date and Time:
Mon Jan 19 09:43:37 AM EST 2026

kali@kali:~$ bash menu.sh

MENU PROGRAM

1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit

Enter your choice:
4
Users currently logged in:
kali    sshd    2026-01-19 09:00 (-0)

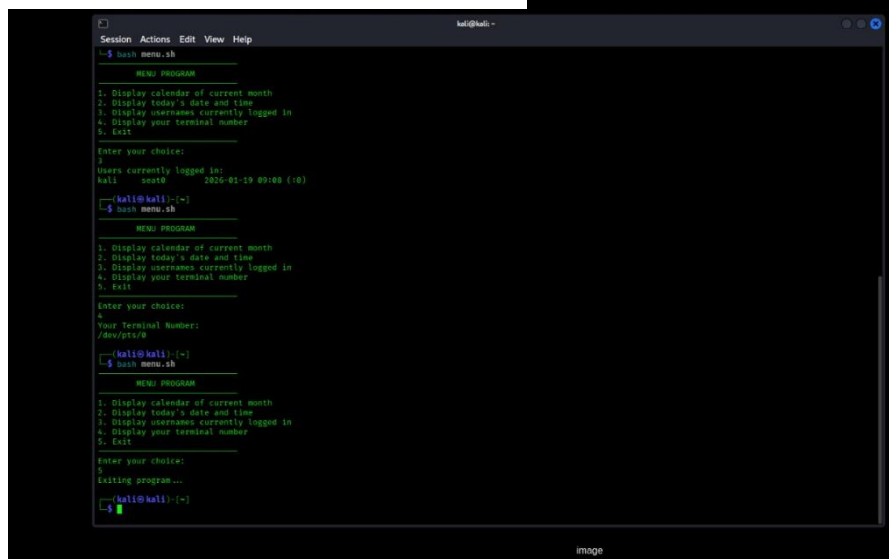
kali@kali:~$ bash menu.sh

MENU PROGRAM

1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit

Enter your choice:
5
Your Terminal Number:
/dev/pts/0

kali@kali:~$ bash menu.sh
```



```
kali@kali:~$ bash menu.sh

MENU PROGRAM

1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit

Enter your choice:
5
Users currently logged in:
kali    sshd    2026-01-19 09:00 (-0)

kali@kali:~$ bash menu.sh

MENU PROGRAM

1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit

Enter your choice:
5
Your Terminal Number:
/dev/pts/0

kali@kali:~$ bash menu.sh

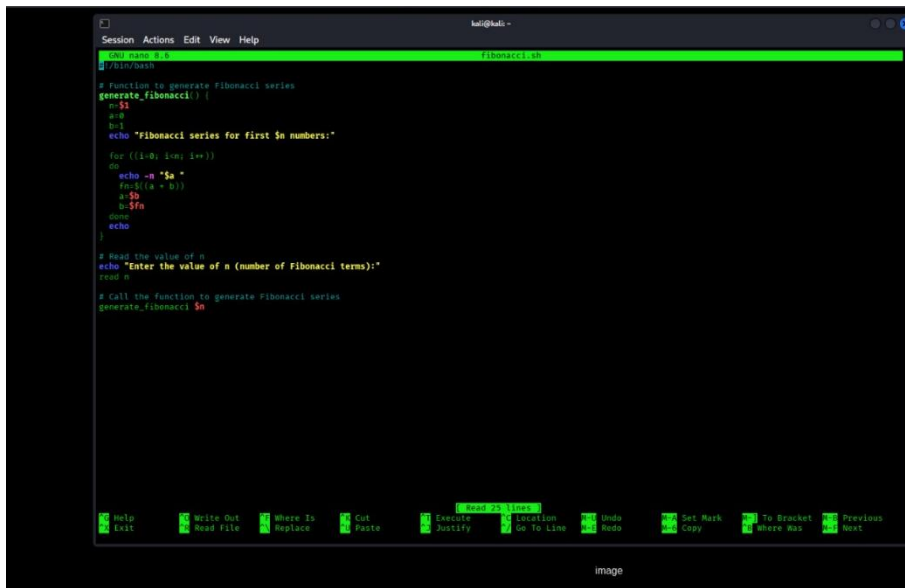
MENU PROGRAM

1. Display calendar of current month
2. Display today's date and time
3. Display usernames currently logged in
4. Display your terminal number
5. Exit

Enter your choice:
5
Exiting program...

kali@kali:~$
```

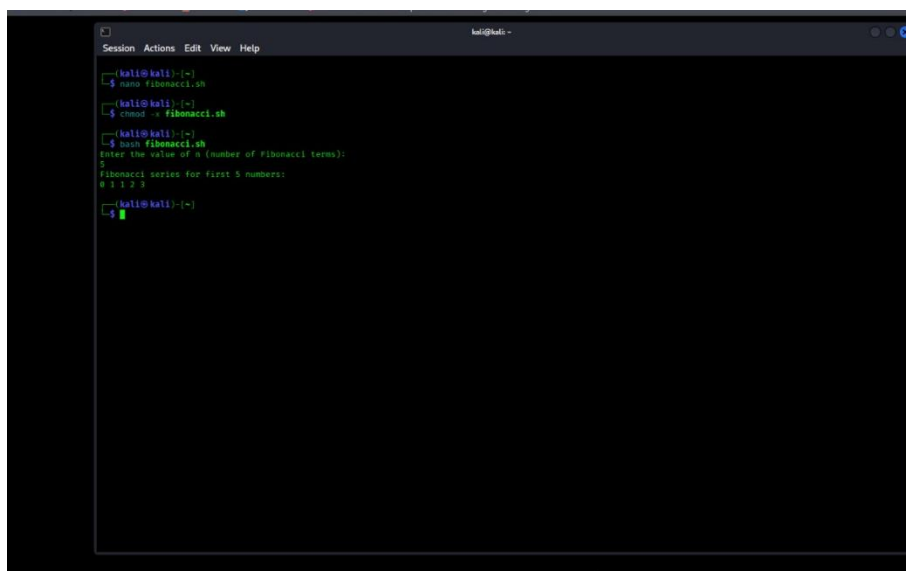
3 .Write a shell script which will generate first n Fibonacci numbers like: 1, 1, 2, 3, 5, 13



```
Session Actions Edit View Help
[Ctrl] nano $ > fibonacci.sh
# function to generate Fibonacci series
generate_fibonacci() {
    n=$1
    a=0
    b=1
    echo "Fibonacci series for first $n numbers:"
    for ((i=0; i<n; i++))
    do
        echo -n "$a "
        fn=$((a + b))
        a=$b
        b=$fn
    done
    echo
}

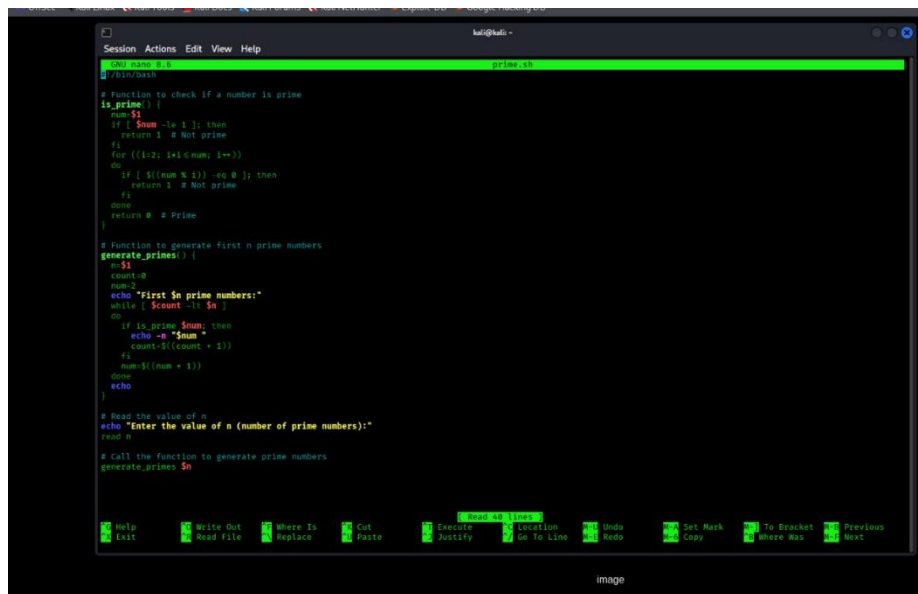
# Read the value of n
echo "Enter the value of n (number of Fibonacci terms):"
read n

# Call the function to generate Fibonacci series
generate_fibonacci $n
```



```
kali@kali:~$ nano fibonacci.sh
kali@kali:~$ chmod +x fibonacci.sh
kali@kali:~$ ./fibonacci.sh
Enter the value of n (number of Fibonacci terms):
5
Fibonacci series for first 5 numbers:
0 1 1 2 3
kali@kali:~$
```

4. Write a shell script which will accept a number b and display first n prime numbers as output.



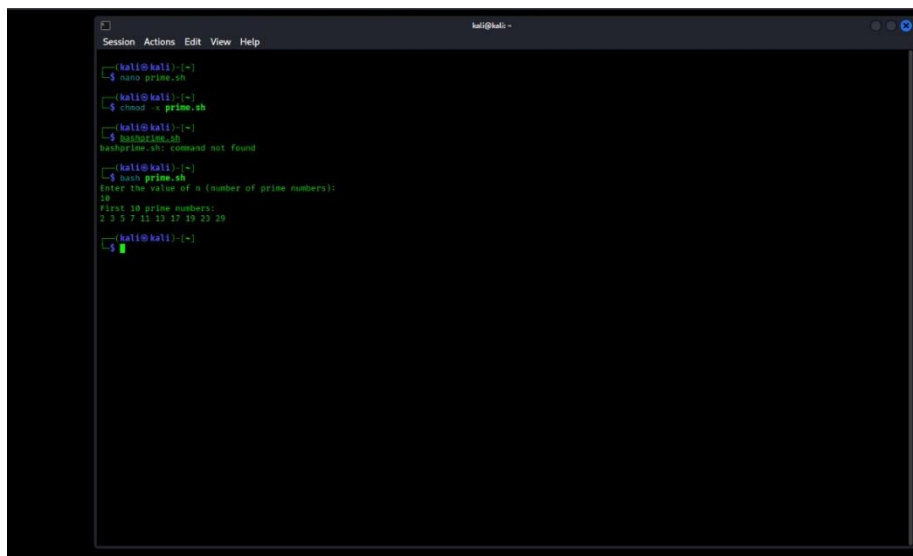
```
#!/bin/bash

# Function to check if a number is prime
is_prime() {
    num=$1
    if [ $num -le 1 ]; then
        return 1 # Not prime
    fi
    for ((i=2; i<=num; i++))
    do
        if [ $((num % i)) -eq 0 ]; then
            return 1 # Not prime
        fi
    done
    return 0 # Prime
}

# Function to generate first n prime numbers
generate_primes() {
    n=$1
    count=0
    num=2
    echo "First $n prime numbers:"
    while [ $count -lt $n ]
    do
        if is_prime $num; then
            echo -n "$num "
            count=$((count + 1))
        fi
        num=$((num + 1))
    done
    echo
}

# Read the value of n
echo "Enter the value of n (number of prime numbers):"
read n

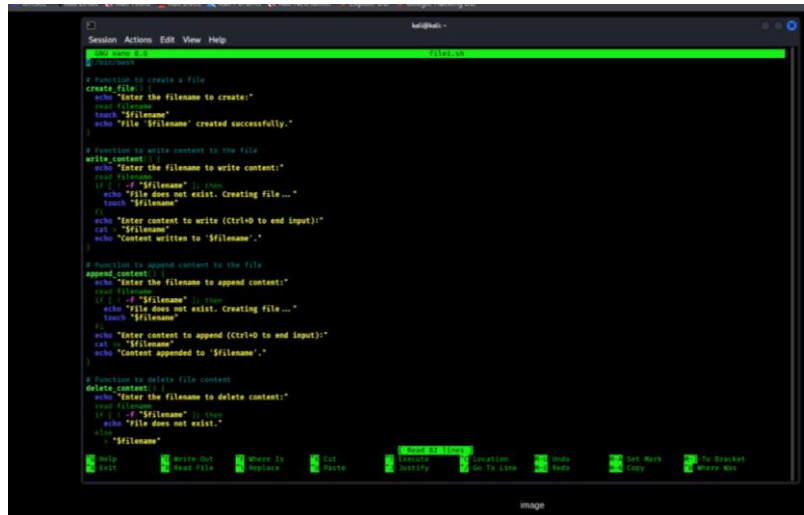
# Call the function to generate prime numbers
generate_primes $n
```



```
(kali@kali):~$ ./prime.sh
Enter the value of n (number of prime numbers):
10
First 10 prime numbers:
2 3 5 7 11 13 17 19 23 29
(kali@kali):~$
```

5. Write menu driven program for file handling activity

- Creation of file
- Write content in the file
- Upend file content
- Delete file content



```
Session Actions Edit View Help
kali@kali: ~$ nano file.sh
# Function to create a file
create_file() {
  echo "Enter the filename to create:"
  read filename
  touch "$filename"
  echo "File '$filename' created successfully."
}

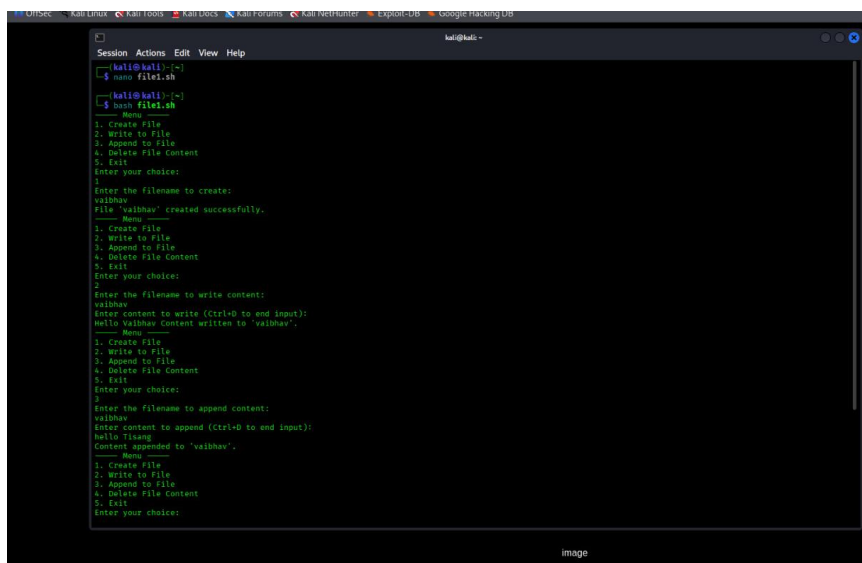
# Function to write content to the file
write_content() {
  echo "Enter the filename to write content:"
  read filename
  if [ -f "$filename" ]; then
    echo "File does not exist. Creating file..."
    touch "$filename"
  fi
  echo "Enter content to write (Ctrl+D to end input):"
  cat > "$filename"
  echo "Content written to '$filename'."
}

# Function to append content to the file
append_content() {
  echo "Enter the filename to append content:"
  read filename
  if [ -f "$filename" ]; then
    echo "File does not exist. Creating file..."
    touch "$filename"
  fi
  echo "Enter content to append (Ctrl+D to end input):"
  cat >> "$filename"
  echo "Content appended to '$filename'."
}

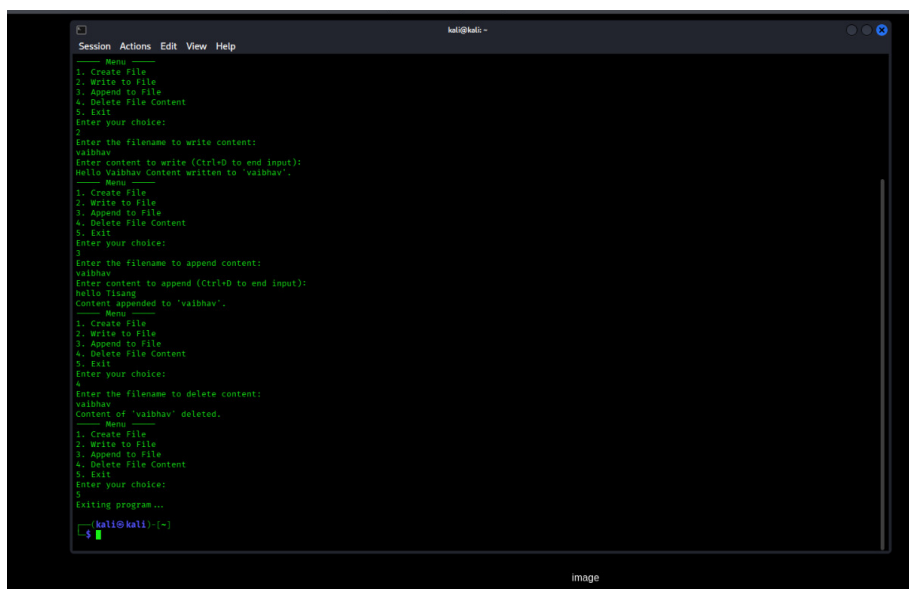
# Function to delete file content
delete_content() {
  echo "Enter the filename to delete content:"
  read filename
  if [ -f "$filename" ]; then
    echo "File does not exist."
  else
    echo "File does not exist."
  fi
}

# Main menu
menu() {
  echo "Menu"
  echo "1. Create File"
  echo "2. Write to File"
  echo "3. Append to File"
  echo "4. Delete File Content"
  echo "5. Exit"
  echo "Enter your choice:"
  read choice
  case $choice in
    1) create_file ;;
    2) write_content ;;
    3) append_content ;;
    4) delete_content ;;
    5) exit ;;
  esac
}

# Start the program
menu
```



```
kali@kali: ~$ ./file.sh
Menu
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice: 1
Enter the filename to create:
vaibhav
File 'vaibhav' created successfully.
Menu
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice: 2
Enter the filename to write content:
vaibhav
Enter content to write (Ctrl+D to end input):
Hello Vaibhav Content written to 'vaibhav'.
Menu
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice: 3
Enter the filename to append content:
vaibhav
Enter content to append (Ctrl+D to end input):
hello Tiagar
Content appended to 'vaibhav'.
Menu
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice: 4
Enter the filename to delete content:
vaibhav
Content of 'vaibhav' deleted.
Menu
1. Create File
2. Write to File
3. Append to File
4. Delete File Content
5. Exit
Enter your choice: 5
Exiting program...
```



```
Session Actions Edit View Help
kali@kali: ~$ nano file.sh
# Function to create a file
create_file() {
  echo "Enter the filename to create:"
  read filename
  touch "$filename"
  echo "File '$filename' created successfully."
}

# Function to write content to the file
write_content() {
  echo "Enter the filename to write content:"
  read filename
  if [ -f "$filename" ]; then
    echo "File does not exist. Creating file..."
    touch "$filename"
  fi
  echo "Enter content to write (Ctrl+D to end input):"
  cat > "$filename"
  echo "Content written to '$filename'."
}

# Function to append content to the file
append_content() {
  echo "Enter the filename to append content:"
  read filename
  if [ -f "$filename" ]; then
    echo "File does not exist. Creating file..."
    touch "$filename"
  fi
  echo "Enter content to append (Ctrl+D to end input):"
  cat >> "$filename"
  echo "Content appended to '$filename'."
}

# Function to delete file content
delete_content() {
  echo "Enter the filename to delete content:"
  read filename
  if [ -f "$filename" ]; then
    echo "File does not exist."
  else
    echo "File does not exist."
  fi
}

# Main menu
menu() {
  echo "Menu"
  echo "1. Create File"
  echo "2. Write to File"
  echo "3. Append to File"
  echo "4. Delete File Content"
  echo "5. Exit"
  echo "Enter your choice:"
  read choice
  case $choice in
    1) create_file ;;
    2) write_content ;;
    3) append_content ;;
    4) delete_content ;;
    5) exit ;;
  esac
}

# Start the program
menu
```